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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/687,748

10/20/2003

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10/02/2008

EXAMINER

GETTMAN, CHRISTINA DANIELLE

ART UNIT

PAPER NUMBER

3734

MAIL DATE

DELIVERY MODE

10/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/687,748

Applicant(s)

NISHIKI, ABE

Examiner

CHRISTINA D. GETTMAN

Art Unit

3734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 17-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

In view of the Appeal Brief filed on March 20, 2008, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/T.E.M./

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer (U.S. Patent No. 6,325,625) in view of Sakashita (U.S. Patent

No. 5,370,659). Meyer discloses the invention substantially as claimed including a first and second handle grip (ref. 58, Fig. 4), a first and second jaw (see ref. 58, Fig. 4) each connected to the handle grips, a first and second blade (see ref. 56 area, Fig. 4) connected to the jaws, the first and second blades extending upwardly from the jaws (see ref. 56, Fig. 4; if the device were to be flipped, the blades would be extending upwardly), and the handle grips joined together so that when the handle grips are apart the blades are together (joined at pivot point; col. 6, lines 60-63). It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Meyer does not disclose a ratchet means pivoting between the first and second handle grip, the curved rack attached to the first handle grip by a first pivot pin, the irregular cog surface pivoting toward the pawl, or a bias means with the first pivot pin. Sakashita teaches a ratchet means (ref. 8, Fig. 1) between the handle grips for the purpose of maintaining a certain distance between the handle grips, a fulcrum pin attaching the handle grips (ref. 29, Fig. 1) so that the handles pivot relative to one another, the ratchet means including a curved rack (ref. 101), cogs (ref. 103, Fig. 7) and a pawl (ref. 106, Fig. 7), the curved rack being attached to the first handle grip, and the first and second set of elements being one integral part (after the device is assembled, all of the elements are one integral, or joined, part). Therefore, it would have been obvious to have placed a fulcrum pin in the device of Meyer, as taught by Sakashita, in order to allow pivotal movement between the two handle grips to allow them to open and close

the blades. It would have also been obvious to one having ordinary skill in the art at the time of the invention to have modified Meyer with the ratchet means of Sakashita in order to keep the blades from separating from one another while inserting the dental separator. Sakashita also teaches a curved rack attached to a first handle grip by a pivot pin (ref. 102) for the purpose of rotation of the ratchet, and a bias means (ref. 109) with the first pivot pin for the purpose of biasing the cogs toward the pawl. Therefore, it would have been obvious to have modified Meyer with a rotating ratchet means in order to provide rotation to the curved rack to allow it to rotate up to and against the pawl to further keep the handles/device in a locked position. Meyer does not specifically disclose that the enlarged hook means are ball-shaped but it would have been obvious to have made them in that shape in order to obtain a better connection with the receptacles.

Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer and Sakashita as applied to claim 2 above, and further in view of Cox. Meyer discloses the invention substantially as claimed including the curved rack having a smooth side (see side opposite ref. 103, Fig. 7), an irregular cog surface (ref. 103, Fig. 7), and the irregular cog surface pivoting towards the pawl. Meyer and Sakashita do not disclose a pawl that is attached to the second handle grip by a second pivot pin. Cox teaches a pawl attached to a second handle grip by a pivot pin (col. 1, line 32) for the purpose of bringing the pawl into and out of engagement with the cog surface. Therefore, it would have been obvious to one having ordinary skill in the art to have modified Meyer and Sakashita with a pivoting pawl in order to rotate the pawl towards

the cogs when in an engaged position and to rotate the pawl away from the cogs when in a disengaged position.

Claims 4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer, Cox and Sakashita as applied to claim 3 above, and further in view of Seber (U.S. Patent No. 6,748,829). Meyer, Cox and Sakashita disclose the invention substantially as claimed including resilient means to bias the curved rack toward the pawl (see ref. 109 of Sakashita). Meyer, Cox and Sakashita disclose the invention substantially as claimed except for the curved rack having a slot that is wide enough to accommodate a pawl in an engaged position and a disengaged position. Seber et al. teach a curved rack with a slot (see Fig. 2A and 3A) for the purpose of allowing the pawl to move within the curved rack. Therefore, it would have been obvious to one having ordinary skill in the art to have modified Meyer, Cox and Sakashita with a slot in the curved rack that accommodates the pawl as disclosed by Seber et al. in order to allow the pawl of one handle grip to remain connected to the slot of the other handle grip so that they do not become separated during use. They also do not disclose the curved rack having a guide groove, the second handle grip having a spring loaded projection, a stop positioned on the second handle grip, the spring-loaded projection extending into the guide groove and the guide groove terminating in a decreasing depth taper. Seber teaches a curved rack with a guide groove (ref. 40), a spring-loaded projection (ref. 84), a stop positioned on the second handle grip (ends of ref. 40 act as a stop) for the purpose of controlling the pivotal movement of the curved rack. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to

have modified Meyer, Cox and Sakashita with a spring-loaded projection that is inserted into a guide groove, as taught by Seber, in order to allow for engagement and disengagement of the pawl with the cogs of the curved rack. It is well-known in the art to have a decreasing depth taper on a slot in order to allow for an element that is inserted into the slot to easily move into and out of the slot.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer and Sakashita, as applied to claim 9 above, and further in view of Tiedemann (U.S. Patent No. 2003/0233119). Meyer and Sakashita disclose the invention substantially as claimed except for the hook being coated. Tiedemann teach a hook that is coated with a non-slip material for the purpose of protecting the skin (par. 23, line 9). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Meyer and Sakashita with a polymer coating, such as that taught by Tiedemann, in order to increase the frictional resistance between the forceps and dental separator prior to insertion of the separator.

Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer and Sakashita as applied to claim 1 above, and further in view of Tillier (U.S. Patent No. 1,477,786). Meyer and Sakashita disclose the invention substantially as claimed except for the first and second sets being made from on integral shaped spring element or the first and second jaws criss-crossing each other. Tillier teaches a tool to spread an element apart that is made from one integral piece (see Fig. 1) for the purpose of decreasing manufacturing costs. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Meyer

and Sakashita and made the entire device from one integral part, as taught by Tillier, in order to ease manufacturing costs and decrease production time.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer and Sakashita as applied to claim 2 above, and further in view of Roux (U.S. Patent No. 4,124,929). Meyer and Sakashita disclose the invention substantially as claimed except for a spring with said fulcrum pin to bias the handle grips away from each other. Roux teaches using a spring with the fulcrum pin (see ref. 19, Fig. 1) for the purpose of biasing the handles away from one another. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Meyer and Sakashita with a spring in-between the handles, as taught by Roux, in order to bias the handles away from one another as taught by Roux.

Response to Arguments

Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTINA D. GETTMAN whose telephone number is (571)272-3128. The examiner can normally be reached on Monday-Thursday 6:45 am to 3:15 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Todd Manahan can be reached on 571-272-4713. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christina D Gettman/
Examiner, Art Unit 3734
571-272-3128

/Todd E Manahan/
Supervisory Patent Examiner, Art Unit 3731